CLAIMS

1. A MIM (metal-insulator-metal) capacitor comprising:

a substrate;

a first metal area;

a second metal area formed between the substrate and the first metal area; and

a first insulating layer formed between the first metal area and the second metal area;

wherein a capacitance value is determined by opposing surface areas of the first metal area and the second metal area;

and further comprising:

a third metal area formed between the second metal area and the substrate; and

a second insulating layer formed between the third metal area and the second metal area;

wherein the third metal area is connected to a ground potential.

2. The MIM capacitor according to claim 1, wherein a surface area of a surface of the third metal area opposing the second metal area is smaller than a surface area of a surface of the second metal area.

3. The MIM capacitor according to claim 2, wherein a metal-free area formed in the third metal area is formed by a plurality of metal-free areas.

4. The MIM capacitor according to claim 3, wherein the plurality of metal-free areas are formed in parallel.

5. The MIM capacitor according to claim 3, wherein the plurality of metal-free areas are formed intersecting.

6. The MIM capacitor according to claim 2, wherein at least one of the metal-free areas is formed so as to be partitioned symmetrically to the third metal area.

7. The MIM capacitor according to any of the claims 1 to 6, wherein the third metal area is formed as a diffusion layer having conductivity.

8. A MIM capacitor comprising:

a substrate;

a first metal area and a second metal area formed respectively opposing the substrate;

a third metal area formed between the first metal area and the substrate so as to oppose the first metal area;

a fourth metal area formed between the second metal area and the substrate so as to oppose the second metal area; and

an insulating film formed between the first metal area and the third metal area, and between the second metal area and the fourth metal area;

wherein a first capacitance value is determined by opposing surface areas of the first metal area and the third metal area, and a second capacitance value is determined by opposing surface areas of the second metal area and the fourth metal area;

and further comprising a fifth metal area formed in an electrically floating state between the third and fourth metal areas and the substrate so as to oppose both the third metal area and the fourth metal area.

9. The MIM capacitor according to claim 8, wherein the fifth metal area is connected to a ground potential.

10. The MIM capacitor according to claim 9, wherein the fifth metal area is connected to the ground potential at a connection point such that impedance to the third metal area and impedance to the fourth metal area are substantially equivalent.

11. A MIM capacitor comprising:

a substrate;

a first metal area and a second metal area formed respectively opposing the substrate;

a third metal area formed between the first and second metal areas and the substrate so as to oppose both the first metal area and the second metal area;

wherein a first capacitance value is determined by opposing surface areas of the first metal area and the third metal area, and a second capacitance value is determined by opposing surface areas of the second

metal area and the third metal area; and

wherein the third metal area is formed so as to be in an electrically floating state.

12. The MIM capacitor according to claim 11, wherein the third metal area is connected to a ground potential.

13. The MIM capacitor according to claim 12, wherein the third metal area is connected to the ground potential at a connection point such that impedance to the first metal area and impedance to the second metal area are substantially equivalent.

14. The MIM capacitor according to any of the claims 8 to 10, wherein the fifth metal area is formed as a diffusion layer having conductive property.